AMENDMENTS TO THE CLAIMS

1.   (Currently Amended) An image coding device comprising:

memory means for reading and storing predetermined image areas of input image data; and

a wavelet conversion section for performing wavelet conversion filtering on the image areas, in a horizontal or vertical direction, as soon as the image data is stored in the memory means,

the wavelet conversion section including fixed-point type wavelet conversion means and integer type wavelet conversion means,

wherein the fixed-point type wavelength conversion means comprises a bit-shifter and a wavelet converter; and

the integer type wavelet conversion means comprises only the wavelet converter.

2.   (Canceled)

3.   (Currently Amended) The image coding device according to claim 12, wherein the wavelet converter of the integer type wavelet conversion means has a same structure as that of the wavelet converter of the fixed-point type wavelet conversion means.

4.   (Original) The image coding device according to claim 3, wherein the wavelet converter comprises a multiplier or a shift calculator, an adder/subtracter, and a register.

5.   (Original) The image coding device according to claim 3, wherein the multiplier or shift calculator, the adder/subtracter, and the register as structural components are all common to the wavelet converter of the integer type wavelet conversion means and the wavelet converter of the fixed-point type wavelet conversion means.

6.   (Original) The image coding device according to claim 1, wherein the integer type wavelet conversion means is selected to perform reversible coding, and the fixed-point type wavelet conversion means is selected to perform irreversible coding.

3

7.   (Original) The image coding device according to claim 1, wherein the fixed-point type wavelet conversion means is selected to perform coding with image quality taken to be important, and the integer type wavelet conversion means is selected to perform reduction of hardware, saving of power consumption, or coding at a low bit-rate.

8.   (Currently Amended) An image coding method comprising the steps of:
reading and storing predetermined image areas of input image data into a memory; and
performing wavelet conversion filtering on the image areas, in a horizontal or vertical direction, as soon as the image data is stored in the memory,
wherein in the wavelet conversion, either fixed-point type wavelet conversion or integer type wavelet conversion is selected;
wherein the fixed-point type wavelength conversion means comprises a bit-shifter and a wavelet converter; and
the integer type wavelet conversion means comprises only the wavelet converter.

9.   (Currently Amended) An image decoding device comprising:
fixed-point type wavelet reverse conversion means;
integer type wavelet reverse conversion means; and
memory means for writing and keeping only a predetermined image area of a decoded image generated by reverse conversion by means of one of the a fixed-point type wavelet reverse conversion means and the an integer type wavelet reverse conversion means,
wherein the fixed-point type wavelet reverse conversion means comprises a bit-shifter and a wavelet reverse converter, and the integer type wavelet reverse conversion means comprises only the wavelet reverse converter without the bit-shifter.

10.   (Canceled)

11.   (Currently Amended) The image decoding device according to claim 109, wherein

the wavelet reverse converter comprises a multiplier or a shift calculator, an adder/subtracter, and a register.

12.   (Original) The image decoding device according to claim 11, wherein the multiplier or shift calculator, the adder/subtracter, and the register are all common to the integer type wavelet reverse conversion means and the fixed-point type wavelet reverse conversion means.

13.   (Canceled)

14.   (Original) An image decoding device into which a coded bit stream generated by a coding device comprising integer type wavelet conversion means and/or fixed-point type wavelet conversion means is inputted, the image decoding device comprising:
    means for detecting whether wavelet conversion performed by the coding device is of an integer type or a mixed-point type, from the inputted coded bit stream;
    integer type wavelet reverse conversion means for decoding the coded bit stream converted by the integer type wavelet conversion means; and
    means for controlling decoding operation to be paused if the inputted coded bit stream is of the fixed-point type.

15.   (Currently Amended) An image decoding method comprising:
    a wavelet reverse conversion step of performing fixed-point type wavelet reverse conversion or integer type wavelet reverse conversion; and
    a step of writing and keeping only a predetermined image area of a decoded image generated by reverse conversion performed by the wavelet reverse conversion step,
    wherein the fixed-point type wavelet reverse conversion means comprises a bit-shifter and a wavelet reverse converter, and the integer type wavelet reverse conversion means comprises only the wavelet reverse converter without the bit-shifter.

16.   (Canceled)